



LIFESTYLE MODIFICATION AND WEIGHT REDUCTION IMPACT ON PSORIASIS DISEASE

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ABSTRACT

Psoriasis is a chronic autoimmune disease that affects the skin and joints. It typically presents as abnormal skin patches characterized by red, scaly, and very itchy spots. It affects patients in different manners with different severities ranging from small spots or spots that cover a larger area of the skin. Due to the negative impact psoriasis has on the quality of life, many patients are exploring other options that can help improve their symptoms. Among those is weight reduction. This review is aimed at providing an overview of the published clinical literature to give physicians an indication of what the answer could be. Moreover, since obesity is correlated with psoriasis vulgaris it is thus also the subject of investigation in this review. This is a literature review conducted to answer the following question: what are the effects of weight loss on the degree of plaque psoriasis recorded in clinical trials published from 1990 to December 2017. The objective of this study is to find the relationship between the severity of psoriasis and weight. Ten clinical trials met the inclusion criteria of this review and were included in the final analysis. Diet and exercise are worthy of consideration as adjunct treatments for psoriasis. Diet and exercise improve the overall health of the patients, are effective in combating oxidative stressors, and also show a positive impact on the Psoriasis Area and Severity Index (PASI) scores of patients with psoriasis. Categories: Dermatology, Allergy/Immunology.

KEYWORDS: psoriasis, weight loss, exercise, diet, obesity, immunotherapy.

INTRODUCTION AND BACKGROUND

Psoriasis is a chronic autoimmune disease that affects the skin and joints. It typically presents as abnormal skin patches characterized by red, scaly, and very itchy spots. It affects patients in different manners with different severities ranging from small spots or spots that cover a larger area of the skin.^[1] The majority of cases with psoriasis have the subtype Psoriasis vulgaris (scaling psoriasis) and this subtype is one of many subtypes, some of which are pustular, inverse erythrodermic and guttate which account for only 10% of the cases.

Psoriasis occurs worldwide and affects people irrespective of age. Psoriasis occurs worldwide and

affects people irrespective of age it was even recorded to be present at birth in some cases. The prevalence varies considerably worldwide and among different ethnic and age groups. In the United States, for example, psoriasis affects only 2% of the population, while in Japan it is very low, and it is almost nonexistent in aboriginal Australians and Indians from South America. There is a genetic aspect to the disease where the risk of redeveloping it if one of twins has it is higher than in the general population. Psoriasis has a variable morphology, distribution, severity, and course. It is a papulosquamous disease that can be separated into two categories depending on the scaling size: it is either less than 1 cm or more than 1 cm, and it is defined as scaling papules or

plaques, respectively. Lesions of psoriasis are unique among Dermatologic conditions in that they are very well demarcated, red, circular with grey or silver dry scale. The body distribution of psoriasis includes the scalp, elbows, knees, lumbosacral area, and in The body folds. The scaling is distributed symmetrically and can develop in sites of injury, which is known as The Koebner phenomenon. Psoriasis has no cure, however, there are several treatments that can affect the course of The disease and improve symptoms, like immune system suppressing medications such as methotrexate or Topical steroid creams to improve symptoms. Other treatments used are vitamin D3 cream and ultraviolet Light.

The disease is associated with an increased risk of developing psoriatic arthritis, cardiovascular disease, Crohn's disease, and lymphomas. Depression can also be co-morbid with psoriasis especially In teenage females with a visible scaling. The disease can be worsened with certain conditions such as stress and changing of seasons. Alcohol consumption, hot water, and scratching the psoriatic skin Are also factors that worsen the disease. This review aims at studying the effects of weight loss on the symptoms of psoriasis in obese patient.

Pathophysiology of Psoriasis

Psoriasis develops due to an interaction between genetic predisposition and environmental triggers.

Important inflammatory cytokines involved include:

Tumor Necrosis Factor-alpha (TNF- α)

Interleukin-17 (IL-17)

Interleukin-23 (IL-23)

Interleukin-6 (IL-6)

These cytokines stimulate rapid proliferation of keratinocytes, resulting in thick, erythematous, scaly plaques.

Lifestyle Modification

Lifestyle modification aims to reduce systemic inflammation and improve overall health. Healthy Diet
A Mediterranean-style diet is recommended because it contains:

Fruits, Vegetables, Whole grains, Fish, Olive oil, Nuts

Foods to avoid include: Processed foods, Sugary drinks, Saturated fats, Excess salt, Benefits include reduced inflammation and improved metabolic health.

Physical Activity

Regular exercise: Reduces inflammatory cytokines, Improves insulin sensitivity, Promotes weight loss, Improves cardiovascular health, Enhances mental health, Adults should perform at least 150 minutes of moderate-intensity exercise per week.

Smoking Cessation

Smoking increases: Disease severity, Risk of flare-ups, Treatment resistance, Smoking cessation improves long-term disease control.

Alcohol Reduction

Excessive alcohol intake is associated with:

Increased psoriasis severity, Poor medication adherence, Increased liver toxicity, Reducing alcohol consumption improves treatment outcomes.

Stress Management

Psychological stress is a common trigger for psoriasis exacerbation.

Stress management techniques include: Meditation

Yoga, Deep breathing exercises, Adequate sleep, Counseling.

Weight Reduction

Weight loss is considered one of the most effective non-pharmacological interventions.

Methods include: Calorie restriction

Regular exercise, Behavioral counseling

Bariatric surgery (in selected obese patients)

Clinical studies have shown that losing 5–10% of body weight significantly reduces psoriasis severity.

Weight reduction has a positive impact on psoriasis because obesity increases inflammation in the body. Fat tissue is not just a storage site for fat; it also acts like an endocrine organ by releasing inflammatory chemicals that can worsen psoriasis.

Weight reduction is an important supportive strategy in psoriasis management. It decreases systemic inflammation, reduces disease severity, improves the response to treatment, lowers the risk of associated diseases, and enhances quality of life. Combining weight loss with standard medical therapy provides better outcomes than medication alone.

Weight-loss interventions were associated with clinically and statistically significant improvements in psoriasis severity (PASI and PASI 75) and quality of life (DLQI). These findings support the role of weight-loss interventions as effective adjuncts to medical therapy and their integration into holistic psoriasis care.

METHODS

This review was prospectively registered (PROSPERO 2023 CRD42023485378) and conducted per the Cochrane Handbook for Systematic Reviews of Interventions 24 and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) reporting guidelines.

Keywords

diet, exercise, glucagon-like peptide-1 receptor agonist, medical dermatology, PASI, physical activity, psoriasis, quality-of-life, weight.

Weight-loss interventions were associated with clinically and statistically significant improvements in psoriasis severity (PASI and PASI 75) and quality of life (DLQI). These findings support the role of weight-loss

interventions as effective adjuncts to medical therapy and their integration into holistic psoriasis care.

Conflict of interest:- The authors declare that there is no conflict of interest regarding the publication of this review article.

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